

**REMARKS****I. General**

Claims 1-43 are pending in the present application. Applicants note with appreciation that the Examiner has indicated that claims 4-5, 10, 14-18, 24, and 29 include allowable subject matter and would be allowed if rewritten in independent form to include the limitations of the base and any intervening claim from which they depend.

Claims 1, 2, 6-8, 11-13, 19-21, 25-27, 30-34, and 36-39 stand rejected under 35 U.S.C. §103. Applicants respectfully traverse the rejections of record.

Claim 3 has been amended to correct an informality discovered during the preparation of this Amendment. Specifically, claim 3 has been amended to include the preposition “of” between recitation of “integration” and “said pilot signal.” The amendment to claim 3 does not alter the scope of the claim, and no new matter has been added.

Claims 4 and 23 have been amended to correct an informality discovered during the preparation of this Amendment. Specifically, these claims have been amended to delete a typographical error in which “sorter” was recited when “shorter” was intended. The typographical error was obvious from a review of the claim language and its correction has not introduced new matter.

**II. The 35 U.S.C. §103 Rejections**

Claims 1, 2, 6-8, 11-13, 19-21, 25-27, 30-34, and 36-39 stand rejected under 35 U.S.C. §103(a) as being obvious over Eswara et al., U.S. patent number 6,597,927 (hereinafter *Eswara*), in view of Tanaka et al., U.S. patent number 6,347,220 (hereinafter *Tanaka*). Claims 3, 9, 23, 28, 35, and 40-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Eswara* in view of *Tanaka* and further in view of Wang et al., U.S. patent number 6,404,803 (hereinafter *Wang*). Applicant respectfully traverses the rejections of record.

Three elements are needed for a *prima facie* case of obviousness under 35 U.S.C. §103: (1) motivation to modify or combine reference teachings, (2) a reasonable expectation of success, and (3) prior art references that teach or suggest all the claim limitations. Without

conceding that any of the other criteria are met, Applicant respectfully asserts that the rejection of record fails to establish a *prima facie* case of obviousness, at least, because the applied references do not teach or suggest all of the claim limitations.

**A. The Independent Claims**

Claim 1 recites “traffic beam forming circuitry operable to provide a plurality of traffic beams formed from a same signal [and] common use beam forming circuitry operable to provide a common use beam formed from said signal . . . .” Similarly, claim 19 recites “forming a plurality of traffic beams having different attributes from a same signal [and] forming a common use beam from said signal . . . .” The rejection of record relies upon the teachings of *Eswara* in meeting the above identified aspects of these claims, see the Office Action at page 2. However, *Eswara* teaches the formation of multiple traffic beams from different signals and an umbrella beam formed from yet another signal, see column 3, lines 52-67, and column 4, lines 1-13. Specifically, the traffic beams of *Eswara* are formed from different traffic channels on different traffic frequencies, see column 3, lines 45-67. The umbrella beam of *Eswara* is formed from a separate control channel, see column 3, lines 45-67. Accordingly, *Eswara* teaches the formation of traffic beams and an umbrella beam each from different signals, and not the traffic beams and common use beam formed from a same signal as set forth in claims 1 and 19. The disclosure of *Tanaka* is not relied upon to cure the above identified deficiency in *Eswara*. Accordingly, the rejection of record fails to establish a *prima facie* case of obviousness with respect to claims 1 and 19.

Claim 1 further recites that “beam analysis circuitry operates to analyze each traffic beam of said plurality of traffic beams with respect to said common use beam.” Similarly, claim 19 recites “analyzing each traffic beam of said plurality of traffic beams with respect to said common use beam . . . .” The Office Action is unclear with respect to the basis for rejecting the above identified aspect of the claims. Initially, the Office Action states that *Eswara* teaches analysis circuitry, see the Office Action at page 2. However, the Office Action concedes that *Eswara* “does not specifically disclose analyzing,” and thus introduces *Tanaka*, see *id.* Accordingly, the basis for rejecting the claims is unclear and appears to be in contradiction to the mandates set forth in M.P.E.P. §706.

Applicant is unable to identify any portion of *Eswara* which meets the above identified aspects of the claims. Accordingly, Applicant presumes that the rejection of record intends to rely upon the disclosure of *Tanaka* to meet these aspects of the claims. However, in contrast to the present claims, *Tanaka* teaches analysis based on a selection controller which “senses the beam (despread signal) having the largest power and inputs this to the selectors,” see column 9, lines 41-45. *Tanaka* does not disclose a common use beam. Accordingly, *Tanaka* does not teach analyzing each traffic beam of a plurality of traffic beams with respect to a common use beam. Therefore, combining the teachings of *Tanaka* and *Eswara* would not have led one of ordinary skill in the art to the present claims. The rejection of record, therefore, does not establish a *prima facie* case of obviousness under 35 U.S.C. §103 with respect to claims 1 and 19.

Claim 36 recites, *inter alia*, “emulating a forward link channel characteristic in the reverse link . . . .” The rejection of record does not expressly address the limitations of claim 36, but states that *Eswara* in view of *Tanaka* meet the limitations of claim 36. However, the above identified aspect of the claim remains unaddressed by the rejection of record. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been established with respect to claim 36.

Applicant respectfully points out that the rejection of claim 36 does not comport with Office policy. Specifically, the Examiner is directed that “[i]n accordance with the patent statute, ‘Whenever, on examination, any claim for a patent is rejected , or any objection . . . made’, notification of the reasons for rejection and/or objection together with such information and references as may be useful in judging the propriety of continuing the prosecution (35 U.S.C. 132) should be given,” M.P.E.P. § 707. As such the Examiner has not “clearly articulate[d] any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity,” M.P.E.P. §706. Applicant therefore requests that the Examiner set forth the grounds for rejection with respect to claim 36 in order that Applicants may have a full and fair opportunity to explore the patentability of this claim.

**B. The Dependent Claims**

Dependent claims 2-18, 20-35, and 37-43 each depend directly or indirectly from one of the independent claims discussed above, and therefore incorporate the limitations thereof. Accordingly, Applicant respectfully asserts that each of the dependent claims is patentable over the art of record at least for the reasons set forth above with respect to respective ones of the independent claims. Moreover, the dependent claims recite additional new and non-obvious limitations not present in the art of record.

For example, claims 2 and 21 recite that the signal used in forming the plurality of traffic beams and the common use beam is a pilot signal. Although the rejection of record asserts that *Tanaka* teaches a pilot signal, there is nothing in the disclosure of *Eswara* or *Tanaka* to teach or suggest a same pilot signal in each of the plurality of traffic beams and the common use beam.

With respect to claims 3 and 22 reciting pilot integration circuitry providing independent integration of the pilot signal as communicated by different antenna elements of an antenna array, the Office Action takes official notice that use of integrators to evaluate signals is well known, see the Office Action at page 4. However, assuming *arguendo* that the use of integrators to evaluate signals is well known, such is not enough to meet the limitations recited in the claim. Specifically, the use of an integrator to evaluate signals does not teach pilot integration circuitry providing independent integration of the pilot signal as communicated by different antenna elements of an antenna array. If the Examiner's position is that merely using integrators to evaluate signals meets the express limitations of the claim, the Examiner is hereby requested, as provided under Rule 37 C.F.R. §1.104(d)(2), to provide and make of record an affidavit setting forth his data as specifically as possible for the assertion. Alternatively, under M.P.E.P. §2144.03, the Examiner is hereby requested to cite a reference in support of the assertion.

Claims 6, 25, and 40 recite that the plurality of traffic beams include a plurality of traffic beams having a same bore sight direction and a different other beam attribute. In rejecting these claims, the Office Action states that it would have been obvious to evaluate a best beam based upon beam width and gain from the disclosures of *Eswara* and *Tanaka*, see the Office Action at page 3. However, such an evaluation does not meet the recited plurality of traffic beams having a same bore sight direction and a different other beam attribute.

Claims 13 and 32 recite that the common use beam is formed with respect to a first link direction and emulates a beam utilized in conducting communications in a second link direction. In rejecting these claims, the Office Action concedes that *Eswara* does not teach emulation but asserts that *Tanaka* teaches emulation, see the Office Action at page 3. However, the portions of *Tanaka* relied upon to meet the claim do not appear to teach emulation. *Tanaka* never mentions emulation or the characteristics of emulation. In contrast with the claim, *Tanaka* teaches “beam selection control and downlink beam forming on/off control based upon the results of the sensing processing” of known pilot signals. Accordingly, *Tanaka* does not teach or suggest emulation meeting the present claim.

With respect to claim 20, the rejection of record states that *Eswara* discloses a particular subscriber unit, see the Office Action at page 4. However, claim 20 recites that the signal used in forming the plurality of traffic beams and the common use beam is a signal associated with a particular subscriber unit. The rejection of record does not address this aspect of the claims.

Claim 23 recites that an integration period associated with integrating the signal is shorter than a Doppler period associated with the subscriber unit. This aspect of the claims remains unaddressed by the rejection of record, see the Office Action at page 4.

Claim 33 recites forming a first traffic beam having attributes derived from the identified traffic beam to communicate a first traffic signal and forming a common use beam having attributes consistent with the common use beam formed from the signal to communicate a common use signal associated with the first traffic signal. The limitations of this claim remain unaddressed by the rejections of record, see the Office Action at page 3.

Claim 37 recites that the emulated forward link channel characteristic is associated with a common pilot used in the forward link. The rejection of record does not address this aspect of the claims.

Claim 42 recites that the most desirable attribute includes a most desirable phase match and signal gain combination. The rejection of record does not address this aspect of the claims.

Claim 43 recites providing another independently optimized forward link beam simultaneously with providing the optimized forward link traffic beam, wherein traffic signals communicated in each of the optimized forward link beams has a same pilot signal. This aspect of the claims remains unaddressed by the rejection of record.

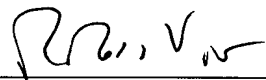
### III. Summary

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 65948/P066US/10400210 from which the undersigned is authorized to draw.

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Respectfully submitted,

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